

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte RAYMOND J. WONG

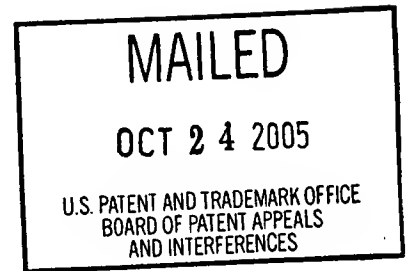
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Appeal No. 2005-1662  
Application No. 09/996,505

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HEARD: September 15, 2005

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Before GARRIS, WARREN, and TIMM, Administrative Patent Judges.  
GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal that involves claims 1-11, 13-38 and 50-61.

The subject matter on appeal relates to a sorbent cartridge comprising an alkali metal-Group IV B metal carbonate such as sodium zirconium carbonate as a layer in the cartridge. This appealed subject matter is adequately represented by independent claims 1 and 11 which read as follows:

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1. A sorbent cartridge comprising at least two layers, wherein one of said layers comprises at least sodium zirconium carbonate in said sorbent cartridge.

11. A sorbent cartridge comprising an alkali metal-Group IV B metal carbonate, wherein one of said alkali metal-Group IV B metal carbonate is present as a layer in said sorbent cartridge.

The following prior art is relied upon by the examiner as evidence of obviousness:

Polak et al. (Polak	4,650,587	Mar. 17, 1987
Smakman et al. (Smakman)	4,542,015	Sep. 17, 1995
Potts	5,234,603	Aug. 10, 1993
Marantz et al. (Marantz)	3,669,880	Jun. 13, 1972
Tawil et al. (Tawil)	4,025,608	May 24, 1977

The admitted prior art known as the REDY™ cartridge as disclosed, for example, in Figure 8 of the appellant's drawing.

Claims 1, 3-9, 11, 13-16, 19-25, 29-38 and 50-61 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the REDY™ cartridge in view of Polak, and the remaining claims on appeal are correspondingly rejected over the aforementioned prior art in various combinations with the other above listed references.

We refer to the brief and reply brief and to the answer for a thorough discussion of the opposing viewpoints expressed by the appellant and by the examiner concerning these rejections.

OPINION

For the reasons which follow, we cannot sustain any of the rejections advanced by the examiner on this appeal.

Concerning his rejection of independent claims 1 and 11, the examiner expresses his obviousness position in the paragraph bridging pages 3 and 4 of the answer as follows:

Appellant's disclosure of prior art REDY™ teaches a sorbent cartridge having several layers of sorbents such as zirconium phosphate (ZrP), zirconium hydrous oxide (HZO), activated carbon, etc., (specification pages 5-8 and figure[s] 1 and 8), but does not teach sodium zirconium carbonate as one of the layers as in claims 1 and 11. Polak teaches a sorbent capsule comprising sodium zirconium carbonate (see col 5 line 68 - col 6 line 11) as phosphate ion absorber and/or for elimination of urea. It would be obvious to one of ordinary skill in the art at the time of invention to use the teaching of Polak in the teaching of REDY™ for sorption of urea and phosphate ions because SZC is the state of the art for phosphate ion absorption and/or because of the problems associated with ZrP used by REDY as taught by Polak (see Polak col 3 lines 11-36 and col 6 lines 1-2).

In his "Response to Arguments" section of the answer, the examiner further elucidates his obviousness viewpoint with the following language on pages 12 and 13 of the answer:

The primary ref [i.e., reference] REDY teaches a cartridge with several layers, but does not teach one of the layers is or as having SZC. The secondary ref [i.e., reference] Polak teaches SZC as a known state-of-the-art phosphate ion absorber (Polak col 6 lines 1-2). The main thrusts of Appellants' [sic] arguments are that Polak does not teach SZC as a layer or teach "two layers", and that there is no motivation to combine the references. With respect to the argument that Polak does not teach SZC as a layer, the rejection does not require that Polak teach SZC as a layer. "Layers" are taught by REDY. Polak teaches SZC. (Polak does teach about layers in the description of the prior arts). Re the motivation, one of ordinary skill in the art would be motivated to use SZC in or as one of the layers in REDY because of its ability to absorb phosphate ions. One of ordinary skill in the art also would use the teaching of Polak in the teaching of REDY for Polak's teaching of "elimination of urea" (see col 6 lines 9-11).

It may also be noted that HZO used by REDY (HZO-Ac, which is the acetate form of HZO) is equivalent in function to SZC because HZO is used as a phosphate absorber in REDY, and the Polak ref teaches that HZO is the state-of-the-art for phosphate absorption, which would give motivation to one of ordinary skill in the art to use SZC in place of HZO.

Appellants' [sic] argument that examiner is taking the position that the ZrP from the multi-layered REDY cartridge is replaced with MGP of Polak which includes SZC is not correct. Examiner does not need to take such a position, even though one of ordinary skill in the art could do so. One of ordinary skill in the art could simply add a layer of SZC or MGP+SCZ to the REDY cartridge, or substitute SZC for the HZO-Ac, for the reasons stated above.

As reflected by the quotations above, the examiner's obviousness analysis proposes a variety of ways for combining the applied prior art in such a manner as to read on the here claimed invention. It is well settled, however, that a proper obviousness analysis also requires particular identification of some suggestion, teaching or motivation to combine the prior art as well as specific findings such as the nature of the problem to be solved which support an obviousness conclusion. See In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617-18 (Fed. Cir. 1999). It is these latter aspects of a proper obviousness analysis which are lacking from the aforequoted obviousness position advanced by the examiner in this appeal.

For example, the examiner urges that "one of ordinary skill in the art would be motivated to use SZC in or as one of the layers in REDY because of its ability to absorb phosphate ions" (answer, page 13). By itself, this ability would not have motivated an artisan to provide SZC in one of the layers of the REDY™ cartridge for the simple reason that the HZO-Ac layer of

this cartridge already performs a phosphate ion absorbing function.<sup>1</sup>

As for the examiner's proposed substitution of SZC for the HZO-Ac layer of REDY™, we fully share the appellant's view that an artisan would not have made this substitution because it would result in loss of a number of functions performed by the REDY™ HZO-Ac layer such as fluoride and heavy metals absorption (i.e., the Polak reference contains no teaching or suggestion that SZC absorbs either fluoride or heavy metals).

Finally, we perceive no convincing merit in the examiner's position that "the Polak ref [i.e., reference] teaches that HZO is the state-of-the-art for phosphate absorption which would give motivation to one of ordinary skill in the art to use SZC in place of [the] HZO [in the REDY™ cartridge]" (answer, page 13). While we appreciate that Polak describes HZC as state-of-the-art (see the paragraph bridging columns 5 and 6), the patent contains

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<sup>1</sup>The examiner has proffered no reason, and we can think of none independently, for providing the REDY™ cartridge with two different components, namely, SZC and HZO-Ac, for performing the same phosphate ion absorbing function. To the contrary, since the REDY™ prior art contains no teaching or suggestion that its HZO-Ac layer inadequately performs this function, an artisan would have considered such a provision to be needlessly redundant and therefore an unnecessary expense.

no disclosure which provides any context or meaning to this description. It appears to be the examiner's implicit belief that the afore-noted description reflects that SZC would be superior to the HZO-Ac of REDY™ in absorbing phosphate ions. However, there is simply nothing in the record before us to support such a belief.

In light of the foregoing, it is our perception that the examiner has based his motivation for obviousness upon prior art statements viewed in the abstract such as Polak's statements that SZC is a phosphate ion absorber and is state-of-the-art. Although the test for establishing motivation is what the combination of prior art statements would have suggested to those of ordinary skill, such statements must be considered in the context of the teaching of the entire reference and cannot be viewed in the abstract. In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000). Beyond a mere identification in prior art references of individual components of claimed subject matter, particular findings must be made as to reasons why an artisan, with no knowledge of the claimed

invention, would have selected these components for combination in the manner claimed. Id.

Here, the prior art statements identified by the examiner such as Polak's statements regarding SZC may appear in the abstract to suggest combining the prior art teachings in the manner proposed by the rejection of independent claims 1 and 11. However, when considered in the context of the prior art teachings as a whole, these statements would not have provided the motivation for combining the applied prior art teachings in such a manner as to yield the sorbent cartridge defined by these independent claims. Id., 217 F.3d at 1371, 55 USPQ2d at 1318.

For the above stated reasons, it is our determination that the prior art REDY™ cartridge and the Polak reference fail to establish a prima facie case of obviousness with respect to appealed claims 1 and 11. This deficiency is not supplied by the other prior art applied against the remaining claims on appeal.



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It follows that we cannot sustain any of the § 103 rejections  
advanced by the examiner.

The decision of the examiner is reversed.

REVERSED

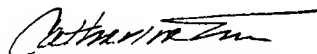


BRADLEY R. GARRIS )  
Administrative Patent Judge )



CHARLES F. WARREN )  
Administrative Patent Judge )

BOARD OF PATENT  
APPEALS AND  
INTERFERENCES



CATHERINE TIMM )  
Administrative Patent Judge )

BRG/vsh

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